



Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 6862 (2005): Clevis Pins without head [PGD 31: Bolts, Nuts and Fasteners Accessories]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”



BLANK PAGE



PROTECTED BY COPYRIGHT

भारतीय मानक
बिना शीर्ष के क्लेविस पिन
(दूसरा पुनरीक्षण)

Indian Standard
CLEVIS PINS WITHOUT HEAD
(*Second Revision*)

ICS 21.060.50

© BIS 2005

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

NATIONAL FOREWORD

This Indian Standard (Second Revision) which is identical with ISO 2340 : 1986 'Clevis pins without head' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Bolts, Nuts and Fasteners Accessories Sectional Committee and approval of the Medical Instruments, General and Production Engineering Division Council.

The original version of this standard was issued in 1973 and revised in 1981. This second revision is being published harmonizing with ISO 2340 : 1986 by adoption of to make pace with the latest developments taken place at international level.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain terminology and conventions are, however, not identical to those used in Indian Standards. Attention is drawn especially to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 1234 : 1971 ¹⁾ Split pins — Metric series	IS 549 : 2005 Split pins — Specification (<i>third revision</i>)	Technically equivalent
ISO 2081 : 1986 Metallic Coatings — Electroplating coatings of zinc on iron or steel	IS 1573 : 1986 Electroplated coatings of zinc on iron and steel (<i>second revision</i>)	do
ISO 3269 : 1988 ¹⁾ Fasteners — Acceptance inspection	IS 1367 (Part 17) : 2005 Technical supply conditions for threaded steel fasteners: Part 17 Inspection, sampling and acceptance procedure (<i>fourth revision</i>)	do
ISO 4520 : 1981 Chromate conversion coatings on electroplated zinc and cadmium coatings	IS 9839 : 1981 Chromate conversion coatings on electroplated zinc and cadmium coatings	do

As decided by the Committee additional requirements of packaging, BIS Certification Marking and Marking are given in National Annex A. These additional requirements are part of this standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

¹⁾ Since revised in 2000.

Indian Standard
CLEVIS PINS WITHOUT HEAD
(Second Revision)

1 Scope and field of application

This International Standard specifies the characteristics of clevis pins without head, with metric dimensions and nominal diameters, d , from 3 to 100 mm inclusive.

2 References

ISO 1234, *Split pins — Metric series*.

ISO 2081, *Metallic coatings — Electroplated coatings of zinc on iron or steel*.

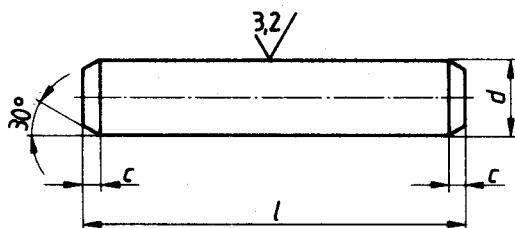
ISO 3269, *Fasteners — Acceptance inspection*.

ISO 4520, *Chromate conversion coatings on electroplated zinc and cadmium coatings*.

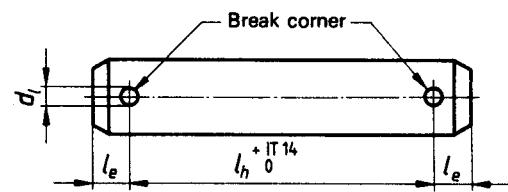
3 Dimensions

Surface roughness values in micrometres

Type A
Without split pin holes



Type B
With split pin holes



NOTES

- 1 Other dimensions, angles and surface roughness value, see type A.
- 2 In cases where a distance l_h which is not in accordance with $l - 2l_e$ is necessary, this distance should be fixed in the designation (see clause 5), but in no case may the values for l_e be smaller than those given in the table.

NOTE — For railway applications and in cases where the split pins are subjected to alternating transverse forces, it is recommended that the next larger split pin and corresponding hole diameter to that specified be used.

Dimensions in millimetres

<i>d</i>	<i>h11</i> ¹⁾	3	4	5	6	8	10	12	14	16	18	20	22	24	27	30	33	36	40	45	50	55	60	70	80	90	100
<i>d₁</i>	H13 ²⁾	0,8	1	1,2	1,6	2	3,2	3,2	4	4	5	5	5	6,3	6,3	8	8	8	8	10	10	10	10	13	13	13	13
<i>c</i>	max.	1	1	2	2	2	2	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	6	6	6	6
<i>l_e</i>	min.	1,6	2,2	2,9	3,2	3,5	4,5	5,5	6	6	7	8	8	9	9	10	10	10	10	12	12	14	14	16	16	16	16
<i>l</i> ³⁾																											
nom.	min.	max.																									
6	5,75	6,25																									
8	7,75	8,25																									
10	9,75	10,25																									
12	11,5	12,5																									
14	13,5	14,5																									
16	15,5	16,5																									
18	17,5	18,5																									
20	19,5	20,5																									
22	21,5	22,5																									
24	23,5	24,5																									
26	25,5	26,5																									
28	27,5	28,5																									
30	29,5	30,5																									
32	31,5	32,5																									
35	34,5	35,5																									
40	39,5	40,5																									
45	44,5	45,5																									
50	49,5	50,5																									
55	54,25	55,75																									
60	59,25	60,75																									
65	64,25	65,75																									
70	69,25	70,75																									
75	74,25	75,75																									
80	79,25	80,75																									
85	84,25	85,75																									
90	89,25	90,75																									
95	94,25	95,75																									
100	99,25	100,75																									
120	119,25	120,75																									
140	139,25	140,75																									
160	159,25	160,75																									
180	179,25	180,75																									
200	199,25	200,75																									

1) Other tolerances, for example a11, c11, f8, as agreed between customer and supplier.

2) Hole diameter d_1 = nominal size of the split pin (see ISO 1234).

3) For nominal lengths above 200 mm, steps of 20 mm.

4 Specifications and reference International Standards

Material	St = Free-cutting steel, hardness 125 to 245 HV. Other materials as agreed between customer and supplier.
Surface finish	Plain, i.e. pins to be supplied in natural finish treated with a rust-preventative lubricant, unless otherwise specified by agreement between customer and supplier. Preferred coatings are black oxide, phosphate coating or zinc plating with chromate conversion coating (see ISO 2081 and ISO 4520). Other coatings as agreed between customer and supplier. All tolerances shall apply prior to the application of a plating or coating.
Workmanship	Parts shall be uniform in quality and free of irregularities or detrimental defects. No burrs shall appear on any part of the pin.
Acceptability	The acceptance procedure is covered in ISO 3269.

5 Designation

Example for the designation of a clevis pin, steel, type B, with nominal diameter $d = 20$ mm and nominal length $l = 100$ mm :

Clevis pin ISO 2340 - B - 20 × 100 - St

Example for the same pin with split pin holes of $\phi 6,3$ mm :

Clevis pin ISO 2340 - B - 20 × 100 × 6,3 - St

Example for the same pin with distance $l_h = 80$ mm :

Clevis pin ISO 2340 - B - 20 × 100 × 6,3 × 80 - St

Example for the same pin with standard split pin holes :

Clevis pin ISO 2340 - B - 20 × 100 × 80 - St

NATIONAL ANNEX A
(National Foreword)

A-1 PACKAGING

Unless otherwise specified the packaging of pins shall be done in cartons or boxes in quantities of 100, 500 or 1 000. Each carton shall have pins of one size only. The size and quantity shall be clearly indicated on the cartons or boxes.

A-2 BIS CERTIFICATION MARKING

Details available with the Bureau of Indian Standards.

A-3 MARKING

The cartons containing the pins shall be marked with size and indication of the source of manufacture.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards : Monthly Additions'.

This Indian Standard has been developed from Doc : No. PG/BP 33 (0436).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110 002
Telephones : 2323 0131, 2323 3375, 2323 9402 Website : www.bis.org.in

Regional Offices :

		Telephones
Central	: Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110 002	{ 2323 7617 2323 3841
Eastern	: 1/14 C. I. T. Scheme VII M, V. I. P. Road, Kankurgachi KOLKATA 700 054	{ 2337 8499, 2337 8561 2337 8626, 2337 9120
Northern	: SCO 335-336, Sector 34-A, CHANDIGARH 160 022	{ 260 3843 260 9285
Southern	: C. I. T. Campus, IV Cross Road, CHENNAI 600 113	{ 2254 1216, 2254 1442 2254 2519, 2254 2315
Western	: Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400 093	{ 2832 9295, 2832 7858 2832 7891, 2832 7892

Branches : AHMEDABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE. FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR. LUCKNOW. NAGPUR. NALAGARH. PATNA. PUNE. RAJKOT. THIRUVANANTHAPURAM. VISAKHAPATNAM.